REMARKS

Favorable reconsideration of the above-identified patent application in light of the foregoing amendment and the following remarks is respectfully requested.

Claims 3-5, 7, 9, 11 and 14-28 are active in the application; Claims 3-5, 7, 9, 11 and 14-17 are amended; Claims 1-2, 6, 8, 10 and 12-13 are canceled without prejudice or disclaimer to expedite prosecution.

The November 27, 2001 Office Action. In the Office Action dated November 27, 2001, Claims 6-10 were rejected under 35 U.S.C. § 112, ¶ 2 as not positively reciting a step of recording data; Claims 1-10 were rejected under 35 U.S.C. § 101 as being directed to data that constitutes non-statutory subject matter; Claims 1-17 were rejected under 35 U.S.C. § 102 or § 103 as follows:[2]

Claim 1:	U.S. Patent No. 6,137,954 (Sawabe *et al.* '954)
Claim 2:	Sawabe *et al.* '954 in view of U.S. Patent No. 5,999,698 (Nakai *et al.*)
Claims 3-6:	Sawabe *et al.* '954
Claim 7:	Sawabe *et al.* '954 in view of U.S. Patent No. 6,148,138 (Sawabe *et al.* '138)
Claim 8:	Sawabe *et al.* '954
Claim 9:	Sawabe *et al.* '954 in view of Sawabe *et al.* '138
Claim 10:	Sawabe *et al.* '954
Claim 11:	Sawabe *et al.* '954 in view of Sawabe *et al.* '138
Claim 12:	Sawabe *et al.* '954
Claim 13:	Sawabe *et al.* '954 in view of Nakai *et al.*
Claim 14:	U.S. Patent No. 5,686,954 (Yoshinobu *et al.*)
Claim 15:	Yoshinobu *et al.* in view of U.S. Patent No. 6,229,951 (Schultz *et al.*)
Claims 16-17:	U.S. Patent No. 6,282,365 (Gotoh *et al.*)

Response to Office Action. To overcome the rejection of Claims 6-10 under 35 U.S.C. § 112, ¶ 2, Applicants amend independent Claim 7 to positively recite method steps in the body of the claim, including a step of recording packets onto the information recording medium. Accordingly, the preamble and body of Claim 7 are believed to be consistent, thus rendering it clear and definite within the meaning of 35 U.S.C. § 112, ¶ 2.

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[2]Several apparent typographical errors in the Office Action's statements of rejection are corrected in the list presented here.

Claim 9 depends from Claim 7 and thus also is clear and definite. Claims 6, 8 and 10 are canceled without prejudice or disclaimer to expedite prosecution, rendering their rejection moot. Therefore, reconsideration and withdrawal of the rejection of Claims 6-10 under 35 U.S.C. § 112, ¶ 2 are respectfully requested.

To overcome the rejection of Claims 1-10 under 35 U.S.C. § 101, Applicants amend independent Claims 3 and 7 so that Claim 3 is more clearly directed to a physical recording medium (an article of manufacture, one of the statutory categories under 35 U.S.C. § 101), and so that Claim 7 is more clearly directed to a method (another statutory category). In particular, Claim 3 now specifically recites that a data area is physically located between a lead-in area and a lead-out area on the information medium (see FIG. 9 elements 20, 21, and 23 for non-limiting support), and Claim 7 now recites method steps of obtaining bitstream information, preparing packets that include the contents of bitstream information, and recording the packets onto the information recording medium.

Thus, Claims 3 and 7, and their respective dependent Claims 4-5 and 9, are believed to pass muster under 35 U.S.C. § 101. Rejected Claims 1-2, 6, 8 and 10 are canceled without prejudice or disclaimer to expedite prosecution, rendering their rejection moot. Therefore, reconsideration and withdrawal of the rejection of Claims 1-10 under 35 U.S.C. § 101 are respectfully requested.

Applicants turn now to the art rejections. Claims 1, 2, 6, 8, 10, 12 and 13 are canceled without prejudice or disclaimer to expedite prosecution (rendering their rejections moot), so that only the following rejections are pending:

Claims 3-5:	U.S. Patent No. 6,137,954 (Sawabe *et al.* '954)
Claims 7, 9, 11:	Sawabe *et al.* '954 in view of U.S. Patent No. 6,148,138 (Sawabe *et al.* '138)
Claim 14:	U.S. Patent No. 5,686,954 (Yoshinobu *et al.*)
Claim 15:	Yoshinobu *et al.* in view of U.S. Patent No. 6,229,951 (Schultz *et al.*)
Claims 16-17:	U.S. Patent No. 6,282,365 (Gotoh *et al.*)

Applicants respond to the art rejections in numerical claim order, notwithstanding the order in which the Office Action rejected the claims.

First, Applicant refers to independent Claims 3, 7 and 11, which recite "partial application packets" that are obtained by splitting said application packets across boundaries of said (sequential or continuous) *stream* packets (see Applicants' FIG. 39). Applicants submit that this feature is not disclosed in or suggested by the Sawabe *et al.* patents considered either individually or in combination.

The Office Action's rejection of Claim 3 does not mention this limitation. More pertinently, in ¶ 11 of the Office Action, the examiner refers to columns 2 and 16, and FIG. 10, of the Sawabe *et al.*'954 patent. However, these extended passages merely refer to "partial record information blocks" that correspond to predetermined reproduction intervals that are set in advance, or related to interleaved blocks. However, especially as evidenced by Sawabe's FIG. 10, these concepts do not disclose, teach or suggest anything at the level of packets in a bitstream, especially the breaking up of partial *application* packets across boundaries of *stream* packets as claimed.

For example, none of the packets 41-44 in FIG. 1 of the Sawabe *et al.* '954 patent (presumably corresponding to the claimed *application* packets) is split across the border of a VOBU (presumably corresponding to a *stream* packet). In contrast to the cited art, Applicants' FIGS. 3(c) and 3(d) show portions of a TS packet that provide support for the claimed partial application packet that is split across stream packet boundaries (see Applicants' FIG. 39).

Thus, Claims 3, 7 and 11 are novel, within the meaning of 35 U.S.C. § 102. Moreover, Applicants' arrangement provides the advantage of increased recording density that is not provided by the cited references, demonstrating that Claims 3, 7 and 11 are not obvious, within the meaning of 35 U.S.C. § 103. Therefore, independent Claims 3, 7 and 11, as dependent

Claims 4-5 and 9, are believed to be patentably distinguished over the Sawabe *et al.* patents considered either individually or in combination.

Claims 14-17 are amended to include limitations similar to those discussed above, with reference to Claims 3, 7 and 11.[3] For example, Claim 14 recites that bitstream information is formed into stream packets, each stream packet containing one or more application packets and partial application packets that are obtained by splitting said application packets across boundaries of said stream packets. Applicants submit that the references applied against Claims 14-17 do not disclose, teach or suggest these limitations, and, accordingly, Claims 14-17 should be allowable for at least the reasons that Claims 3, 7 and 11 are allowable.

Claims 15-17 are further limited to application to an MPEG transport stream. Applicants request favorable consideration of this limitation when the claims are again examined.

New Claims 18-23 are directed to a method of reproducing bitstream information, and are supported by the originally-filed specification at, for example, FIG. 1a (transport stream), FIG. 1b (unit start indicator), FIG. 7 (support info), FIG. 9c (area 24), FIG. 9d (area 25), FIG. 14 (apparatus), FIG. 19 (method) and FIG. 39 (partial application packet).

New Claims 25-28 depend from independent Claim 11, and are supported by the originally-filed specification (see FIG. 39 packets; data object "VOB/SOB", MPEG transport stream "MPEG-TS", and data object units "VOBU/SOBU").

Favorable consideration and allowance of newly presented Claims 18-28 are respectfully requested.

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[3]The recitations relating to error correction blocks are deleted, thus broadening those claims in that respect.

In view of the foregoing amendment and the preceding remarks, it is believed that all pending claims are allowable. Reconsideration and withdrawal of the pending rejections are respectfully requested.

It is respectfully submitted that the pending claims are allowable and that the case is in condition for allowance at this time. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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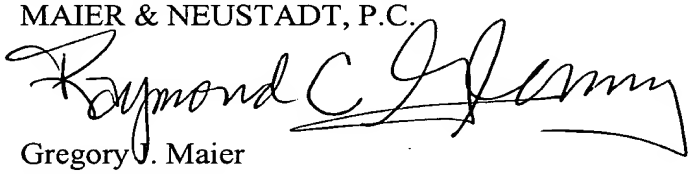

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Marked-Up Copy
Serial No. 09/482,085
Amendment Filed on: 2/27/2002

ATTACHMENT

SHOWING CHANGES TO APPLICATION

1. (cancelled)

2. (cancelled)

3. (Amended) An information medium comprising:

A) a lead-in area;

B) a lead-out area; and

C) a data area physically located between the lead-in area and the lead-out area on the information medium, wherein at least part of the data area is configured to record packets defined in accordance with:

a) a [n] data object formed of one or more data object units each of which serves as a prescribed data unit;

b) control information of said data object, said control information including [;] access unit data used for accessing an access unit which is a part of contents of said data object[, said access unit data being contained in said control information]; and

c) a bitstream [being] formed of a series of said packets, said bitstream including contents of said data object and contents of said control information, wherein said packets include:

c1) one or more stream packets containing one or more application packets; and

c2) partial application packets obtained by splitting said application packets across boundaries of said stream packets.

4. (Amended) The medium of claim 3, wherein said packet includes an application header extension [being] used to store information that can differ from one application packet to another application packet.

5. (Amended) The medium of claim 3, wherein each of said application packets has an application timestamp at [the] a leading portion thereof.

6. (cancelled)

7. (Amended) A method of recording bitstream information on an information recording medium, said bitstream information [comprising] including:

a [n] data object formed of one or more data object units each of which serves as a prescribed data unit;

control information of said data object, said control information including [;] access unit data used for accessing an access unit which is a part of contents of said data object[, said access unit data being contained in said control information]; and

a bitstream [being] formed of a series of packets, said bitstream including contents of said data object and contents of said control information; [,]

wherein:

said packets include one or more sequential or continuous stream packets containing one or more application packets; and partial application packets obtained by splitting said application packets across boundaries of said sequential or continuous stream packets,

[wherein] each of said application packets has an application timestamp at [the] a leading portion thereof, and

[wherein,] when said bitstream information is recorded on said information recording medium, a first byte of said application timestamp of a first one of said application packets is aligned to a start of an application packet area in a first one of said stream packets, said first one of said stream packets being located at beginning of said data object,

the method comprising:

a) obtaining the bitstream information;

b) preparing the packets that include the contents of the bitstream information's data object and the contents of the control information; and

c) recording the packets prepared in the preparing step onto the information recording medium.

8. (cancelled)

9. (Amended) The method of claim 7, wherein:

said packets include one or more stream packets containing one or more application packets; and

[wherein] said application packets are split across boundaries of said stream packets to [provide] constitute partial application packets.

10. (cancelled)

11. (Amended) A method of reproducing bitstream information that [comprises] includes:

a) a [n] data object formed of one or more data object units each of which serves as a prescribed data unit;

b) control information of said data object, said control information including [;] access unit data used for accessing an access unit which is a part of contents of said data object[, said access unit data being contained in said control information]; and

c) a bitstream [being] formed of a series of packets, said bitstream including contents of said data object and contents of said control information, wherein contents of said bitstream [is] are reproduced from said bitstream information, based on said access unit data; [,]

wherein:

said packets include one or more sequential or continuous stream packets containing one or more application packets; and partial application packets obtained by splitting said application packets across boundaries of said sequential or continuous stream packets,

[wherein] each of said application packets has an application timestamp at [the] a leading portion thereof, and

[wherein,] when a first byte of said application timestamp of a first one of said application packets is aligned to a start of an application packet area in a first one of said stream packets located at beginning of said data object, the split one of said partial application packets is reproduced based on contents of access information provided in said stream packets.

12. (cancelled)

13. (cancelled)

14. (Amended) A method of recording broadcasted bitstream information on a recordable information medium having a data area and a management area,

wherein said method uses a display device configured to display electronic program guide information received by a digital broadcast tuner and a recording unit configured to record one or more broadcast programs received by the digital broadcast tuner, and

wherein said bitstream information is formed into stream packets, each stream packet containing one or more application packets and partial application packets that are obtained by splitting said application packets across boundaries of said stream packets,

said method comprising:

designating a specific broadcast program based on displayed contents of said electronic program guide information;

informing said digital broadcast tuner of the specific broadcast program;

receiving from said digital broadcast tuner the specific broadcast program so as to record a bitstream of the specific broadcast program in the data area of said recordable information medium; and

writing in the management area of said recordable information medium, prescribed management information relating to the bitstream recorded in the data area.

15. (Amended) An information medium comprising:

a) a data area configured to store a data object formed of one or more data object units, wherein:

1) each of the one or more data object units corresponds [ing] to one or more stream blocks that are filled with MPEG transport stream information[,each of the one or more stream blocks constituted by one or more blocks for error correction];

2) said data object is recorded on said information medium in a series of packets that each include one or more sequential or continuous stream packets that include one or more application packets; and

3) at least one of said stream packets includes one or more partial application packets obtained by splitting one or more said application packets across boundaries of said stream packets; and

b) a management area configured to store management information relating to said data object.

16. (Amended) A method for recording bitstream data that corresponds to an MPEG transport stream, on an information medium having a data area and a management area, the method comprising[the steps of]:

a) recording the bitstream data in the data area of the information medium as a data object formed of one or more data object units that are filled with information of said MPEG transport stream, wherein:

1) each of the one or more data object units corresponds [ing] to one or more stream blocks[, each of the one or more stream blocks constituted by one or more blocks for error correction];

2) said data object is recorded on said information medium in a series of packets that each include one or more sequential or continuous stream packets that include one or more application packets; and

3) at least one of said stream packets includes one or more partial application packets obtained by splitting one or more said application packets across boundaries of said stream packets; and

b) recording management information relating to the data object in the management area of the information medium.

17. (Amended) A method for playing back bitstream data that corresponds to an MPEG transport stream and that is recorded on an information medium having a data area and a management area, the method comprising[the steps of]:

a) playing back the bitstream data recorded in the data area of the information medium, wherein:

1) the bitstream data is recorded as a data object formed of one or more data object units that are filled with information of said MPEG transport stream; [,]

2) each of the one or more data object units corresponds [ing] to one or more stream blocks[, each of the one or more stream blocks constituted by one or more blocks for error correction];

3) said data object is recorded on said information medium in a series of packets that each include one or more sequential or continuous stream packets that include one or more application packets; and

4) at least one of said stream packets includes one or more partial application packets obtained by splitting one or more said application packets across boundaries of said stream packets; and

b) managing the playing back step using management information relating to the data object recorded in the management area of the information medium.

18. through 28. (New)